



## U.S. GOVERNMENT SUPPORT TO COMBAT AVIAN AND PANDEMIC INFLUENZA

East Asia – particularly Southeast Asia – remains the region most seriously affected by the highly pathogenic avian influenza (HPAI) H5N1 virus. The region has suffered the most human infections, prompting international concerns that a pandemic strain of the virus is most likely to emerge there. As of September 2008, of the 387 human cases confirmed globally by the World Health Organization (WHO), 308 were in Asia, and of 245 fatal cases, 200 were in the region. The spread of HPAI H5N1 among poultry has affected economies and increased pressure for changes in cultural practices with regard to poultry production and marketing.

The region's first outbreak of HPAI H5N1 was identified in Hong Kong in 1997. The virus resurfaced in Southeast Asia in 2003, and has since been confirmed in Burma, Cambodia, China, Indonesia, Japan, Republic of Korea, Laos, Malaysia, Mongolia, Thailand and Vietnam. Millions of birds have died from the disease or been culled to stop its spread.

The U.S. combats HPAI H5N1 by working with governments and regional entities such as the Association of Southeast Asian Nations (ASEAN) and the Asia Pacific Economic Cooperation (APEC) forum, and with the WHO, the Food and Agriculture Organization (FAO), and the World Organization for Animal Health (OIE). U.S. regional assistance approached \$183 million by December 2007, focusing on Cambodia (\$13.6 million), China (\$10.0 million), Indonesia (\$47.6 million), Laos (\$11.3 million), Thailand (\$10.9 million), and Vietnam (\$21.1 million).

The U.S. Agency for International Development (USAID), U.S. Department of Agriculture (USDA), U.S. Department of Health and Human Services (HHS)—including the Assistant Secretary for Preparedness and Response (ASPR), the Centers for Disease Control and Prevention (CDC), the National Institutes of Health (NIH), and the Food and Drug Administration (FDA)—the Department of Defense (DoD) – including the Global Emerging Infection Surveillance and Response System (DoD-GEIS), represented by the Naval Medical Research Unit-2 (NAMRU-2) and the Armed Forces Research Institute of the Medical Sciences (AFRIMS) – the U.S. Department of State (DOS), and the Broadcasting Board of Governors (BBG), focus on strengthening preparedness and response; enhancing human and animal disease surveillance and detection, research and laboratory diagnostics; and increasing public awareness.

### PREPAREDNESS AND COMMUNICATION

U.S. efforts include:

- Establishing regional HPAI hubs with U.S. and local veterinarians in Indonesia and Thailand, and with HPAI control experts in Burma, Cambodia, and Laos (USDA);
- Assisting Indonesia, Taiwan and Vietnam with HPAI vaccine research (USDA);
- Supporting programs in Indonesia to increase capacity for monitoring poultry-vaccination efficacy, strengthen local poultry vaccination production, and assist in effective vaccination strategies (USAID);
- Developing plans to transition from mass vaccination to longer-term methods for control of HPAI in Vietnam (USAID);
- Conducting Good Clinical Research Practices training in Vietnam assisting officials to develop, review, and conduct clinical research protocols (HHS/FDA);
- Co-sponsoring with Japan a seminar on indemnity/compensation (USDA via APEC);
- Assisting preparedness planning in Burma, Cambodia, China, East Timor, Indonesia, Laos, Mongolia, Philippines, Thailand and Vietnam (USAID, HHS/CDC);
- Concluding cooperative agreements with Malaysia, South Korea, and the island nations of the Pacific Public Health Surveillance Network, including Papua New Guinea (CDC);
- Conducting tabletop pandemic preparedness exercises (DoD/PACOM in collaboration with CDC; HHS via RAND Corporation) and seminars (HHS via APEC);
- Supporting the Southeast Asian Influenza Clinical Research Network research sites (HHS/NIH);
- Supporting AI research and training workshops in Malaysia, Cambodia, China, India, Indonesia, Singapore, Thailand and Vietnam (HHS/NIH);
- Supporting risk communications activities in APEC, Burma, Cambodia, China, Indonesia, Laos, Mongolia, Philippines, Thailand and Vietnam (USAID, HHS/CDC);
- Providing experts and funding to WHO's Western Pacific Regional Office (HHS);
- Informing journalists and enhancing vernacular reporting (DOS, USAID, BBG, HHS/CDC);
- Supporting production of two documentaries, conducting media workshops, and sending a CDC media expert to address media and public health audiences in Indonesia (DOS, BBG, HHS/CDC);
- Carrying AI information on [www.america.gov](http://www.america.gov) and on Voice of America (VOA) and Radio Free Asia in Chinese (DOS); [www.voanews.com](http://www.voanews.com) in Burmese, Chinese, Indonesian, Khmer, Thai, Vietnamese (BBG, USAID); and Korean, Lao and Tibetan (BBG);
- Conducting workshops on biosecurity in live bird markets, and providing recommendations for enhanced biosecurity in traditional markets in Cambodia, Indonesia and Vietnam (USDA);
- Conducting rapid response training for health and defense

officials (DoD-GEIS/NAMRU-2);

- Developing a pandemic-preparedness guide for businesses (HHS, Department of Commerce via APEC); and
- Helping to plan a national influenza meeting in Mongolia, a regional influenza meeting for the Pacific Public Health Surveillance Network (PPHSN), and an annual Emerging Infectious Disease Meeting in China that will focus on influenza preparedness (HHS/CDC).

## SURVEILLANCE AND DETECTION

The U.S. is:

- Supporting wild bird surveillance in Cambodia, China, Indonesia, Laos, Philippines and Vietnam (USDA), and through the Global Avian Influenza Network for Surveillance (GAINS) (USAID);
- Conducting workshops on epidemiology and teaching government veterinarians (USDA);
- Supporting surveillance through the Pandemic Preparedness in Asia Contract (HHS/NIH);
- Committing funds for Global Disease Detection Centers in China and Thailand (HHS/CDC);
- Assisting Cambodia, Laos, and Vietnam to establish national surveillance systems (HHS/CDC);
- Assisting the Laos to establish an influenza laboratory (HHS/CDC, DoD-GEIS/NAMRU-2);
- Hosting a regional meeting in Vietnam on epidemiological and modeling methods used to describe influenza epidemiology (HHS/NIH);
- Working with FAO and Indonesian ministries of agriculture and health to build early-warning surveillance and response teams in high-risk provinces (USAID);
- Expanding surveillance capacity across 27,000 villages in Indonesia, training more than 9,700 village AI coordinators, and encouraging community-level surveillance and reporting (USAID);
- Supporting surveillance and epidemiology training for scientists from Cambodia, China, Laos, Malaysia, Thailand, and Vietnam (HHS/CDC, DoD-GEIS/NAMRU-2);
- Training village veterinary workers in Laos, village animal-health workers in six Cambodian provinces, and regional health volunteers (USAID);
- Training HPAI diagnosticians from official veterinary services laboratories in 14 countries, and providing veterinarians and HPAI epidemiologists in Thailand, Vietnam, and Indonesia (USDA);
- Supporting increased diagnostic capacity in Cambodia and Indonesia (DoD-GEIS/NAMRU-2);
- Expanding sentinel surveillance sites and laboratory testing techniques (HHS/CDC) in Thailand, the Philippines, and Vietnam (DoD-GEIS/AFRIMS);
- Supporting human influenza diagnostics training in 17 countries (HHS/CDC);
- Providing real-time polymerase chain reaction (RT-PCR)

machines, analysis reagents and personnel training in Vietnam and elsewhere (USDA, DoD-GEIS/NAMRU-2);

- Providing equipment and training to military laboratories (DoD-GEIS/NAMRU-2);
- Supporting Institut Pasteur/Cambodia affiliates to add laboratory capabilities to analyze seasonal and pandemic influenza viruses, set up surveillance field sites outside the capital, and train teams in sample collection and containment (HHS/ASPR);
- Promoting public-private reporting partnerships, and sponsoring participants at a National Poultry Improvement Plan conference (USAID, USDA); and
- Conducting a regional workshop on Avian Influenza Surveillance in Wildlife in Thailand, in partnership with FAO (USDA).

## RESPONSE AND CONTAINMENT

The U.S. is:

- Expanding infection control in health-care facilities (HHS/CDC);
- Conducting rapid-response training in China (HHS/CDC);
- Supporting regional rapid-response training for officials from 17 countries (HHS/CDC);
- Working with FAO, decreasing the time for reporting animal outbreaks, and the time between onset of influenza symptoms in humans and hospitalization (USAID);
- Establishing regionally deployable rapid response teams (RRTs) in Thailand, and funding training for internationally mobile RRTs in China and Indonesia (HHS/CDC, USAID);
- Providing training materials for WHO-sponsored regional Rapid Containment Workshops in Indonesia and Cambodia on the use of non-pharmaceutical interventions to stop or slow an incipient pandemic (HHS/CDC);
- Working with ministries of health in the Philippines and Mongolia to help those countries decide whether to institute seasonal influenza vaccination programs (HHS/CDC);
- Supporting containment measures in Cambodia, Indonesia and Laos (DoD-GEIS/NAMRU-2, USAID);
- Establishing a regional distribution center in Thailand to stockpile PPE, decontamination kits, and other non-pharmaceutical commodities for regional distribution (USAID);
- Providing PPE, decontamination kits, lab kits and investigation kits to 17 countries (USAID);
- Providing respirators for rapid responders, PPE, and other material (USDA);
- Providing technical assistance to Cambodia, China, Indonesia, Laos, Mongolia, Philippines, Thailand and Vietnam (HHS/CDC, USDA, USAID, DoD-GEIS/NAMRU-2, AFRIMS); and
- Assisting a Vietnamese campaign to vaccinate 249 million poultry (USAID).

Further information in English, Chinese and Vietnamese is available on the U.S. Government's official website [www.pandemicflu.gov](http://www.pandemicflu.gov).

**This region encompasses:** Australia, Brunei, Burma, Cambodia, China, East Timor, Fiji, French Polynesia, Hong Kong, Indonesia, Japan, Kiribati, Laos, Malaysia, Marshall Islands, Micronesia, Mongolia, Nauru, New Caledonia, New Zealand, North Korea, Palau, Papua New Guinea, Philippines, Samoa, Singapore, Solomon Islands, South Korea, Taiwan, Thailand, Tonga, Tuvalu, Vanuatu and Vietnam.